

From glowbugs@theporch.com Thu Nov 14 16:00:42 1996  
Return-Path: <glowbugs@theporch.com>  
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com  
(8.8.2/AUX-3.1.1) with SMTP id PAA13988; Thu, 14 Nov 1996 15:35:45 -0600 (CST)  
Date: Thu, 14 Nov 1996 15:35:45 -0600 (CST)  
Message-Id: <199611142135.PAA13988@uro.theporch.com>  
Errors-To: conard@tntech.campus.mci.net  
Reply-To: glowbugs@theporch.com  
Originator: glowbugs@theporch.com  
Sender: glowbugs@theporch.com  
Precedence: bulk  
From: glowbugs@theporch.com  
To: Multiple recipients of list <glowbugs@theporch.com>  
Subject: GLOWBUGS digest 352  
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas  
X-Comment: Please send list server requests to listproc@theporch.com  
Status: 0

#### GLOWBUGS Digest 352

Topics covered in this issue include:

- 1) Re: AM net  
by "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>
- 2) AM Net Tonight  
by "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>
- 3) AWA 1 tube 160 M QRP rig  
by joe@westonia.com (Joseph Cooper)
- 4) 6BM8 rig  
by lee@radioadv.com (Lee Richey)
- 5) Re: AM net  
by "Brian Carling" <bry@mail1.mnsinc.com>
- 6) Re: 20 Meter AM Net on 14.286  
by "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>
- 7) Recipe for 120 V battery (??)  
by dsibie@hvssa01.nl.lucnet.com
- 8) Re: AWA 1 tube 160 M QRP rig  
by "Peter C. Wotherspoon" <Peter.C.Wotherspoon@hydro.on.ca>
- 9) Re: Recipe for 120 V battery (??)  
by rdkeys@csemail.cropsci.ncsu.edu
- 10) Re: Recipe for 120 V battery (??)  
by rdkeys@csemail.cropsci.ncsu.edu
- 11) 1625 linear QST article found - copies available  
by Roy Morgan <morgan@speckle.ncsl.nist.gov>
- 12) Article on grinding crystals  
by jeffd@coriolis.com (Jeff Duntemann)
- 13) Re: Article on grinding crystals  
by rdkeys@csemail.cropsci.ncsu.edu

- 14) Mail problem  
by Bob <KE4QOK@worldnet.att.net>
- 15) Re: Article on grinding crystals  
by Roy Morgan <morgan@speckle.ncsl.nist.gov>
- 16) RE: Article on grinding crystals  
by "Paul Bocci-CPB007" <Paul\_Bocci-CPB007@email.mot.com>
- 17) Re: Article on grinding crystals  
by rdkeys@csemail.cropsci.ncsu.edu
- 18) Re: Article on grinding crystals  
by rdkeys@csemail.cropsci.ncsu.edu
- 19) Crystal grinding  
by Conard Murray <conard@TNTECH.CAMPUS.MCI.NET>
- 20) Recipe for 120 V battery  
by ralph.hartwell@emachin.com (Ralph Hartwell)
- 21) FS - Intl Rad 9mhz 400hz CW filt - NIB  
by "KA5T Larry Wise" <lewise@inetport.com>

-----  
Date: Wed, 13 Nov 1996 15:09:20 -0500  
From: "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>  
To: "Andy Howard, WA4KCY" <102452.362@CompuServe.COM>  
Cc: glowbugs@theporch.com  
Subject: Re: AM net  
Message-ID: <1.5.4.32.19961113200920.0091a8b4@204.68.227.1>

At 02:36 PM 11/13/96 EST, you wrote:

>Conard,

>

>Why not reactivate the old 20 meter AM net on 14.286. This net ran everyday for  
>28 years until Les, K6HQI, passed away a year or so ago. The net always started  
>at 8:00 PM eastern, 5:00 pacific. As a matter of fact I talked with Doug  
>Beamish, VE4BX, last evening on 75 meter AM. He was a mainstay on they  
frequency

>for all fo the 28 years. He and Les talked every day.

>

Andy and the group,

This sounds like the place to be, I will not be able to be on until I  
finnish running our local club net, but should be there by 10:00 pm latest.  
I have to stop by a friends and get an 0A2 to put in the Drake, but I will  
be there. I will try to be there before the local net also, about 8:00 or  
so. Lissen for the weak little Drake.

73,

Greg

ke4ooo

P.S. I am running a 1/2 wave vertical, the woes of being an apartment dweller.

```
-----  
| Greg Parsons      KE4000      gregp@mis.net  gregp@lfucg.com  gregp@stdio.com  |  
| AMI #865          Who has the coffee? better yet, who has the Ale81s? |  
| NRA Life, SCCA, SCA, DOD http://www.stdio.com/~gregp http://www.lfucg.com |  
-----
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-----  
Date: Wed, 13 Nov 1996 18:36:52 -0500  
From: "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>  
To: glowbugs@theporch.com  
Subject: AM Net Tonight  
Message-ID: <2.2.32.19961113233652.0068dffc@204.68.227.1>
```

Hey Gang,

I sent out a message awhile ago, but it never showed here, so I am going to try it again.

14.286 tonight 01:00z

I will be there, I am there now! just had a wham bam thanks for the contact from a ti3 station... I hate those, wouldn't even talk, just 59 thanks cq dx....

See you all there.

73,

Greg  
ke4ooo

```
-----  
| Greg Parsons      KE4000      gregp@mis.net  gregp@lfucg.com  |  
| AMI #865          Who has the coffee? |  
| NRA Life, SCCA SCA DOD http://www.stdio.com/~gregp http://www.lfucg.com |  
-----
```

```
-----  
Date: Wed, 13 Nov 96 20:13 EST  
From: joe@westonia.com (Joseph Cooper)  
To: glowbugs@theporch.com  
Subject: AWA 1 tube 160 M QRP rig
```

Message-ID: <m0vNqN1-000iALC@gpu2.westonia.com>

This months "The Old Timer's Bulletin" published by the Antique Wireless Association has just arrived. Contained in it is a very interesting article on building a 12 watt input 160 meter "bread board" transmitter project using a 6L6. The author of the article is Frank Lotito, K3DZ (if he is in this group, please stand up and take a bow).

The articles purpose is to illustrate how "historic" circuits (in this case a Harley design taken from a reprint of Hugo Gernsback's 1934 radio manual) can be used with "updated" parts and equipment.

It looks like an interesting project, and one that could be linked to a one or two tube regenerative receiver.

73's

```
=====
* Joseph Cooper-VE3FMQ QTH-East York-near Toronto Ontario Canada *
* Interests are:-Lowfer/VLF/BCB Radio-Woodworking-Steam Railroads *
* Blacksmithing-Antique Radios-Crystal Radios-Travel-Burmese Cats *
* FAX (416) 423-7782 9:00am to 5:00pm EDST Monday To Friday Only *
=====
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-----

Date: Wed, 13 Nov 1996 21:32:34 -0500  
From: lee@radioadv.com (Lee Richey)  
To: "Multiple recipients of list" <glowbugs@theporch.com>  
Subject: 6BM8 rig  
Message-ID: <19961114023541847.AAB181@lee.radioadv.com>

Hi gang,

Here's an update on the 6BM8 rig.

I've now had several QSO's on 3700Khz, all with good reports. I'm using the rig with a Hallicrafters SX-122 and the Vintage Radio full break-in adapter in the new Handbook. Makes a really fun set-up.

I started with differential keying as described in a 60's vintage Handbook (can't remember exactly which one). The idea was to return the osc grid resistor back to the key line instead of ground. That way, the oscillator would come on before the final and go off after the final.

It worked as advertized but there is a (safety) problem with that approach. Key up voltage across the key contacts is about equal to power supply voltage because of the zero bias condition of the osc tube. In my case, over 300 volts!!!! Granted, not much current can be delivered at that voltage, but there is a key click filter capacitor across the key and it stores enough charge to give one a good kick.

So, I grounded the osc grid resistor, removing the differential keying. The rig sounds and looks just as good as it did before but now the key up voltage is only about 54 volts. I like that much better. :-)

All I have to do now is clean up the tack solder jobs and I'll post a gif or jpeg on my web page.

Boy is this thing fun!

-Lee- -WA3FIY-

<http://www.radioadv.com>

-----  
Date: Wed, 13 Nov 1996 19:26:37 +0000  
From: "Brian Carling" <bry@mail1.mnsinc.com>  
To: glowbugs@theporch.com  
Subject: Re: AM net  
Message-ID: <199611140324.WAA20301@user2.mnsinc.com>

HEY! It's a reply from AF4K!

Greg & everyone:

14286 kHz is supposed to be the regular AM spot on 20m but I never hear anyone on there!

On 13 Nov 96, Greg Parsons A.K.A. Rat wrote:

> Sounds like a great idea, who wants to see if we can grab a spot om  
> 75m? or  
> would 40m be better? Let me get a new 0A2 put in the Drake tonight  
> and I will be there... hmmmmmm.... Why not try 20m? it should  
>work...

Someone once said:

"The bands are hot, the bottles they be a' glowin' brightly, an' the regeneration be on the ragged edge! Grapples ye up yer tin cans atopos

yer noggins, an readys ye yer keys at the fore!"  
\*\*\*\*\*  
\*\*\* 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the great ham radio resources at: \*  
\*\* <http://www.mnsinc.com/bry/> \*  
\*\*\*\*\*

-----  
Date: Wed, 13 Nov 1996 22:32:49 -0500  
From: "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>  
To: 102452.362@CompuServe.COM  
Cc: glowbugs@theporch.com  
Subject: Re: 20 Meter AM Net on 14.286  
Message-ID: <2.2.32.19961114033249.00689eb0@204.68.227.1>

Andy and the gang,  
I called CQ from here in Lexington, Ky. for about 30 mins, never did hear anyone, we must be in each others skip zone, worked that one SSB station in Costa Rica, and that was about all I heard, will try again this weekend.

73,  
Greg  
ke4ooo

At 08:19 PM 11/13/96 -0600, you wrote:

>  
>Hello all 20 meter AM fans,  
>  
>Was on the 14.286 AM frequency at 0100Z tonight with the AM station running in  
>good fashion. Worked a SSB station in San Diego and also one in Carlsbad,  
>California. Called CQ a couple more times and connected with Bill, W1CKI, in  
>Connecticut who was on good old AM. We had a 45 minute QSO with very good  
>signals. He runs a BC-610E with an R-388 receiver. I was running a 32V3 and  
>75A4  
>with my 6 element KLM tribander.  
>  
>Hope to see others show up for the Wednesday night net or whenever you can get  
>on 20 meter AM. Activity usually starts at 8:00 PM eastern time.  
>  
>Regards to all,  
>  
>Andy, WA4KCY  
>  
>  
>

-----  
| Greg Parsons      KE4000      gregp@mis.net gregp@lfucg.com      |  
| AMI #865                      Who has the coffee?                      |  
NRA Life, SCCA SCA DOD      <http://www.stdio.com/~gregp>      <http://www.lfucg.com>

-----  
Date: Thu, 14 Nov 96 09:34:53 +0100  
From: dsibie@hvssa01.nl.lucent.com  
To: glowbugs@theporch.com  
Subject: Recipe for 120 V battery (??)  
Message-ID: <9611140834.AA04755@hvssa01.nl.lucent.com>

Friends,

Yesterday I picked up a copy of the ARRL handbook of 1930. Among a lot of nice schemas concerning receivers and transmitters also a description was given of how to make a rectifier that delivers 120 V. It is called an "organic solution rectifier". The active electrode (anode) is a piece of aluminium, the inert electrode (kathode) is a carbon rod taken from an old "B" battery. The organic solution consists of a mixture of ammonium citrate, citric acid, ammonium phosphate, potassium citrate dissolved in distilled water.

Total length of the cell is 6 inch. A photo shows an assembly of 20 of those cells capable of rectifying 750 Volts and delivering 100 mA.

Has someone ever used such a device and what were his/her experiences?

Or is this some kind of ancient Aprils fool practical joke?

72 de Dirk, PA3GNR

-----  
Date: Thu, 14 Nov 1996 07:23:50 -0500 (EST)  
From: "Peter C. Wotherspoon" <Peter.C.Wotherspoon@hydro.on.ca>  
To: Joseph Cooper <joe@westonia.com>  
Subject: Re: AWA 1 tube 160 M QRP rig  
Message-ID: <Pine.SUN.3.91.961114072028.15965B-100000@strong.Hydro.ON.CA>

Hi Joseph

I'm interested in the artical.

Any chance U cud FAX it to me?

Also, I'm going to put together crystal kits for a guide troop.

I'm looking for hi imp. crystall earphones.

They are getting harder and harder to find!

Do u have any suggestions? Or any ideas for the Crystal Radio kit too!

Thanks Peter

592 2574 Voice

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On Wed, 13 Nov 1996, Joseph Cooper wrote:

> This months "The Old Timer's Bulletin" published by the Antique Wireless  
> Association has just arrived. Contained in it is a very interesting article  
> on building a 12 watt input 160 meter "bread board" transmitter project  
> using a 6L6. The author of the article is Frank Lotito, K3DZ (if he is in  
> this group, please stand up and take a bow).

>

> The articles purpose is to illustrate how "historic" circuits (in this case  
> a Harley design taken from a reprint of Hugo Gernsback's 1934 radio manual)  
> can be used with "updated" parts and equipment.

>

> It looks like an interesting project, and one that could be linked to a one  
> or two tube regenerative recvr.

>

> 73's

>

> =====  
> \* Joseph Cooper-VE3FMQ QTH-East York-near Toronto Ontario Canada \*  
> \* Interests are:-Lowfer/VLF/BCB Radio-Woodworking-Steam Railroads \*  
> \* Blacksmithing-Antique Radios-Crystal Radios-Travel-Burmese Cats \*  
> \* FAX (416) 423-7782 9:00am to 5:00pm EDST Monday To Friday Only \*  
> =====

>

>

>

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Date: Thu, 14 Nov 1996 10:24:07 -0500 (EST)

From: rdkeys@csemail.cropsci.ncsu.edu

To: dsibie@hvssa01.nl.lucnet.com

Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com

Subject: Re: Recipe for 120 V battery (??)

Message-ID: <9611141524.AA114430@csemail.cropsci.ncsu.edu>

> Friends,

>

> Yesterday I picked up a copy of the ARRL handbook of 1930. Among a lot  
> of nice schemas concerning receivers and transmitters also a description  
> was given of how to make a rectifier that delivers 120 V.

> It is called an "organic solution rectifier". The active electrode (anode) is  
> a piece of aluminium, the inert electrode (cathode) is a carbon rod taken from  
> an old "B" battery. The organic solution consists of a mixture of ammonium  
> citrate, citric acid, ammonium phosphate, potassium citrate dissolved in



> distilled water.  
> Total length of the cell is 6 inch. A photo shows an assembly of 20 of  
> those cells capable of rectifying 750 Volts and delivering 100 mA.  
> Has someone ever used such a device and what were his/her experiences?  
> Or is this some kind of ancient Aprils fool practical joke?  
>  
> 72 de Dirk, PA3GNR

Chemical rectifiers were quite common in the early days (mostly 1915-1930 or so). My dad used them on his TNT set in 1932. There are two basic types of chemical rectifiers, one using the organic citrate based electrolytes and the other using a lead electrode rather than carbon and washing borax. If borax is used, it is a saturated solution. I am not sure about the citrate solutions as to their strength.

The electrodes are rated at 40 ma per 1 square inch of surface.

The voltage breakdown for each rectifier jar is 50 volts.

Each cell should have a layer about 1/4 inch thick of a light grade of oil is floated on the top of the solution to reduce creepage.

Make sure sufficient electrolyte and electrode surface area are available to prevent excessive heating.

The aluminum surfaces need to be formed to oxides by operation for several hours (4-6 is usually sufficient) from an AC source off the line with 2 or 3 40w/60w bulbs in series as current limiters.

They are crude and sloppy (they tend to creep slop around the tops), but they do work.

73/ZUT DE NA4G/Bob UP

-----  
Date: Thu, 14 Nov 1996 10:26:59 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: rdkeys@csemail.cropsci.ncsu.edu (rdkeys)  
Cc: glowbugs@theporch.com  
Subject: Re: Recipe for 120 V battery (??)  
Message-ID: <9611141527.AA114442@csemail.cropsci.ncsu.edu>

> Chemical rectifiers were quite common in the early days (mostly 1915-1930  
> or so). My dad used them on his TNT set in 1932. There are two basic  
> types of chemical rectifiers, one using the organic citrate based  
> electrolytes and the other using a lead electrode rather than carbon

> and washing borax. If borax is used, it is a saturated solution.  
> I am not sure about the citrate solutions as to their strength.  
>  
> The electrodes are rated at 40 ma per 1 square inch of surface.  
>  
> The voltage breakdown for each rectifier jar is 50 volts.

NOTE: This is the voltage breakdown of the borax rectifier. I am not  
sure of the breakdown voltage of the citrate rectifier.

73/ZUT DE NA4G/Bob UP

-----  
Date: Thu, 14 Nov 1996 10:31:08 -0500  
From: Roy Morgan <morgan@speckle.ncsl.nist.gov>  
To: glowbugs@theporch.com  
Subject: 1625 linear QST article found - copies available  
Message-ID: <9611141531.AA19864@speckle.ncsl.nist.gov>

Glowbuggers,

I found the QST article on the linear using modified 1625's:

A 200-Watt Grounded-Grid Linear  
Unusual Design Using Four Modified 1625 Tetrodes  
by E.L. Hoover, W9SAR, and R.L. Peck, W9MOW  
QST, June 1955 Pg 21, 22, and 128.

Send \$1 for copies.

I'll include as a bonus the 8-page spec sheet from RCA on the 807, dated 1936.  
(Note: The 807 will not work in this circuit, but is electrically  
equivalent to the 1625.)

Roy Morgan, K1LKY  
7130 Panorama Drive  
Derwood MD 20855

-- Roy Morgan/Building 820, Room 562/Gaithersburg MD 20899  
(National Institute of Standards and Technology, formerly NBS)  
301-975-3254 Fax: 301-948-6213 morgan@speckle.ncsl.nist.gov --

-----

Date: Thu, 14 Nov 1996 08:42:13 -0700  
From: jeffd@coriolis.com (Jeff Duntemann)  
To: glowbugs@theporch.com  
Subject: Article on grinding crystals  
Message-ID: <1.5.4.32.19961114083745.0096a3a0@ntserver.coriolis.com>

Hi gang--

I forgot to mention in yesterday's message that the very same issue of CQ (November 1957) containing the 6AL7 magic eye article also contains a \*very\* good article on grinding and etching crystals to change frequencies. "How to GRIND Crystals" (sic) by Robert B. Kuehn W0HKF, page 74. He states plainly that any crystal in the 5 to 6 mc range can be taken all the way up to 9 mc with a little practice and care.

Most intriguing is his description of crystal etching using ammonium bifluoride, which he describes as harmless, tho anything with fluorine in it inspires caution in this particular individual.

He states that most crystals can be taken "down" by as much as 10kc by rubbing a little wire solder on the center of \*one\* face of the crystal. I tried this once and it killed the crystal dead; I suspect the secret is \*do it a little at a time.\*

I find it amazing how much "stuff" is covered in these old Fifties magazines. Unlike the QSTs of the thirties, old CQs from the 50's and 60's are still fairly abundant at hamfests, tho they're starting to smell a little bit these days.

--73--

--Jeff Duntemann KG7JF  
Scottsdale, Arizona

-----  
Date: Thu, 14 Nov 1996 11:38:20 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: jeffd@coriolis.com  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com  
Subject: Re: Article on grinding crystals  
Message-ID: <9611141638.AA114500@csemail.cropsci.ncsu.edu>

> Most intriguing is his description of crystal etching using ammonium  
> bifluoride, which he describes as harmless, tho anything with fluorine in it  
> inspires caution in this particular individual.

Yeah, me too.....

This is the best way to etch xtals, but also the most dangerous.

Ammonium bifluoride (also HF acid or HydroFluoric acid) eats human flesh quite well, so it needs to be handled in a fume hood, and with appropriate safety precautions and personal protective equipment. In very dilute solutions, it is not so bad, but in denser solutions or in the straight acid form, it can be downright mean stuff. I am sure Barry Ornitz can fill us in on the particular details here, if he has some time.

I tried it one time, and it works quite nicely, but takes forever, using ammonium bifluoride, or at least it did for me, with fairly dilute solution.

It is a good way to reactivate xtals that are a bit sluggish and just need some cleanup.

Please use caution and heed appropriate safety practices if you use any of this stuff.

Someone mentioned getting a bunch of blank rocks sans holders for say 1800, 3500, and 7000 khz, and then grinding/etching to suit. Maybe we will find out what a hundred blanks for one of these frequencies might run and go from there. I hope he can follow up on it for the group. This might be a good way to generate some generic xtals and recycle the FT-243 holders that are otherwise useless.

73/ZUT DE NA4G/Bob UP

-----  
Date: Thu, 14 Nov 1996 16:25:18 +0000  
From: Bob <KE4QOK@worldnet.att.net>  
To: glowbugs@theporch.com  
Subject: Mail problem  
Message-ID: <19961114162516.AAA7830@LOCALNAME>

Hi guys,

Been haveing trouble getting mail today. I'm going into major withdrawl. I'm sending this just to see if it will go out or not.

73  
KE4QOK  
Bob  
136 Hermitage Rd.  
Newport News, Va. 23606

-----  
Date: Thu, 14 Nov 1996 13:15:19 -0500  
From: Roy Morgan <morgan@speckle.ncsl.nist.gov>  
To: glowbugs@theporch.com  
Subject: Re: Article on grinding crystals  
Message-ID: <9611141815.AA21434@speckle.ncsl.nist.gov>

At 10:11 AM 11/14/96 -0600, you wrote:  
>> Most intriguing is his description of crystal etching using ammonium  
>> bifluoride,  
>  
>This is the best way to etch xtals, but also the most dangerous.  
>  
>Ammonium bifluoride (also HF acid or HydroFluoric acid) eats human flesh  
>quite well,

I've got a small quantity of Ammonium Bifluoride from the estate of an SK.  
It is in the form of clear crystals, a bit like rock salt or kosher salt.  
It is contained in what appears to be polyethylene bag in a small cardboard  
box. It appears to not have changed its appearance for 30 years, and the  
container appears to not have suffered at all.

My memory of Hydrofluoric Acid from high school is that it is a liquid which  
fumes a bit when exposed to air, and which must be stored in a wax-lined bottle.

Are we talking about the same thing here!

-- Roy Morgan/Building 820, Room 562/Gaithersburg MD 20899  
(National Institute of Standards and Technology, formerly NBS)  
301-975-3254 Fax: 301-948-6213 morgan@speckle.ncsl.nist.gov --

-----  
Date: Thu, 14 Nov 1996 12:33:34 -0600  
From: "Paul Bocci-CPB007" <Paul\_Bocci-CPB007@email.mot.com>  
To: glowbugs@theporch.com, rdkeys@csemail.cropsci.ncsu.edu  
Subject: RE: Article on grinding crystals  
Message-ID: <Macintosh \*/PRMD=MOT/ADMD=MOT/C=US/@MHS>

>Someone mentioned getting a bunch of blank rocks sans holders for say  
>1800, 3500, and 7000 khz, and then grinding/etching to suit. Maybe we  
>will find out what a hundred blanks for one of these frequencies might

>run and go from there. I hope he can follow up on it for the group.  
>This might be a good way to generate some generic xtals and recycle the  
>FT-243 holders that are otherwise useless.

>73/ZUT DE NA4G/Bob UP

I have a quantity of quartz crystal blanks ground for various frequencies in the 40 meter band. These are .5 x .6 inch rectangular blanks which is one of the varieties of FT-243s. (There appear to be 3 or 4 different styles of FT-243s, each with a different size crystal blank).

I am happy to make these available to any one interested in experimenting. If all you care about is a freq somewhere on 40 meters, they should be usable as is. If you are looking for a specific frequency, I should have something within 10 or 20 KC.

Drop me a note if interested. I would like \$1.00 per blank plus \$1.00 for a padded envelope and postage, enough for about 20 crystals.

73 es ZUT  
Paul, K9NO  
CPB007@email.mot.com

-----  
Date: Thu, 14 Nov 1996 14:34:45 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: morgan@speckle.ncsl.nist.gov  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com  
Subject: Re: Article on grinding crystals  
Message-ID: <9611141934.AA114586@csemail.cropsci.ncsu.edu>

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> It is in the form of clear crystals, a bit like rock salt or kosher salt.  
> It is contained in what appears to be polyethylene bag in a small cardboard  
> box. It appears to not have changed its appearance for 30 years, and the  
> container appears to not have suffered at all.  
>  
> My memory of Hydrofluoric Acid from high school is that it is a liquid which  
> fumes a bit when exposed to air, and which must be stored in a wax-lined  
> bottle.  
>  
> Are we talking about the same thing here!

Yup. The fluorine is the culprit. As long as the ammonium bifluoride is dry you are fine (don't touch it directly unless properly attired), the danger is not great. Why do you think it is in a plastic baggie? Mine in the lab is in a plastic baggie in a glass bottle. Hint - the fluoride

ion etches glass (and radio quartz among other things, and human flesh), so it is double contained so the glass bottle is not eaten through.

The ammonium bifluoride, dissolved into solution makes for a weak HF acid as opposed to the 40-60% HF aqueous acid in the classic HF wax lined acid bottle. It is still the same stuff.

It is classed as a skin irritant, and requires 15 minutes flushing the skin after exposure in running water. That is not as bad as the concentrated HF, which is highly corrosive. HF, regardless of its source can ``cause deep, slowly healing to the skin which may not be immediately painful.'' Also, ``contact with the eyes may cause permanent blindness.''

Store in a dry, well-ventilated area. Protect containers from physical damage. Avoid inhalation of dust or fume. Follow good hygienic practice to avoid inhalation or ingestion. CONTAINERS SHOULD BE PLASTIC, RUBBER, WOOD, OR PARAFIN COATED.

Although the HF is the worst stuff, the ammonium bifluoride is the same stuff, in a lesser format. Use care and appropriate cautions, etc.

Bob

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Date: Thu, 14 Nov 1996 14:43:24 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: morgan@speckle.ncsl.nist.gov  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com  
Subject: Re: Article on grinding crystals  
Message-ID: <9611141943.AA114603@csemail.cropsci.ncsu.edu>

> >Ammonium bifluoride (also HF acid or HydroFluoric acid) eats human flesh  
> >quite well,  
>  
> My memory of Hydroflouric Acid from high school is that it is a liquid which  
> fumes a bit when expsed to air, and which must be stored in a wax-lined  
> bottle.  
>  
> Are we talking about the same thing here!

Yup.... I messed up the burns statement.....

HF of any source ``can cause deep, slowly healing burns to the skin which may not be immediately painful.''

Typoes.....

Bob/NA4G

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Date: Thu, 14 Nov 1996 14:16:23 -0600  
From: Conard Murray <conard@TNTECH.CAMPUS.MCI.NET>  
To: rdkeys@csemail.cropsci.ncsu.edu  
Cc: glowbugs@theporch.com  
Subject: Crystal grinding  
Message-ID: <1.5.4.32.19961114201623.006994a4@tntech.campus.mci.net>

Hi Bob,  
If u use HF on 80M xtals, then would u have to use MF on 160M rocks? ;^)

I kinda like the idea of acid etching these guys. I got a friend in the chemistry dept at TTU. Will see if he has any ideas with the ammonium biflouride.

Anything beats grinding on those little square goobers with valve compound. About a week ago I took the 1796 rock and went after it with some Comet cleanser. 200 passes moved the rock 600 Hz or so. I switched over to 320 grit grinding compound and gave it 50 figure-eights and washed/degreased it and found that moved it just under a whole KHz. I figured that I was at 1797.6 and I wanted 1802.5 and that 50 passes gives 1 KHz. That makes 250 swipes, so I gave it just 200 to be safe and ended up at 1818. :-(  
The grinding compound had dried some due to air contact and had more abrasive powers. Gotta watch that stuff. It is a Clover compound but is in a grease base so you gotta clean the blank pretty well after each session, but if you follow the proper cleaning procedure then it is no added work using the grease base.

73 de Conard, ws4s

Conard Murray	WS4S	NNNOUTN	Glowbugs Listowner
217 Dyer Avenue			BA/GB net 1802.5/3579.5/7050 KHz
Cookeville, Tn	38501		conard@tntech.campus.mci.net
615-526-4093			Wise men still seek Him

- LICENSED ONLY TO EXTENT INDICATED ON CARTON -

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Date: Thu, 14 Nov 1996 20:05:00 GMT  
From: ralph.hartwell@emachine.com (Ralph Hartwell)



To: glowbugs@theporch.com  
Subject: Recipe for 120 V battery  
Message-ID: <9611141428284101@emachine.com>

D>It is called an "organic solution rectifier". The active electrode (anode) is  
D>a piece of aluminium, the inert electrode (kathode) is a carbon rod taken fro  
D>an old "B" battery. The organic solution consists of a mixture of ammonium  
D>citrate, citric acid, ammonium phosphate, potassium citrate dissolved in  
D>distilled water.

D>Total length of the cell is 6 inch. A photo shows an assembly of 20 of those  
D>cells capable of rectifying 750 Volts and delivering 100 mA.

D>Has someone ever used such a device and what were his/her experiences?

D>Or is this some kind of ancient Aprils fool practical joke?

It's quite real. I remember a a teenager I made a bank of them to  
make a battery charger. They worked quite well.

I used the carbon rods from a number 6 dry cell, and aluminum strips  
cut from baking pans I bought at the local store. I used a wooden top  
with holes cut in it to hold the carbon rod and the aluminum strip in  
the glass jar. The wood was boiled in wax to keep the wood from  
absorbing moisture from the solution.

I used a solution of water and sodium bicarbonate. I think I used a  
saturated solution, but my memory is a bit hazy there. The cells would  
withstand about 50 volts or so, but as the solution heated up the  
voltage they would handle decreased. When they safe voltage was  
exceeded, you would see nice bright flashes occur on the aluminum strip  
as the cell shorted. Other than the general mess of a liquid system,  
and the limited current capacity, they worked quite well.

Ralph W5JGV

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QMPPro 1.53 All people smile in the same language.

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Date: Thu, 14 Nov 96 21:18:04  
From: "KA5T Larry Wise" <lewise@inetport.com>  
To: "gb" <glowbugs@theporch.com>  
Subject: FS - Intl Rad 9mhz 400hz CW filt - NIB  
Message-ID: <199611142116.PAA06664@admin.inetport.com>

9 MHZ CW crystal filter 400 HZ wide - NIB

This filter was sold as an add-on CW filter for the ICOM 720A  
transceiver. It is not a "plug in" replacement for the

factory filter, but is designed to be mounted off the board and connected to the factory filter terminals via short lengths of coax (supplied). It is larger than the factory FL-32 filter.

I purchased it new, but decided not to install it in the IC-720A, and got a used factory "plug in" instead.

This should be in a home brew rig and not on my shelf!!!

Here are the markings from the box and filter:

Mfg: International Radio & Computer INC  
751 South Macedo Blvd  
Port St. Lucie, Florida 34983  
(407)879-6868

Model: IR-9.0H 400 K  
Freq: 9010.6 KHZ  
No: 111  
(Japan)

Size: 1-1/16 x 3/4 x 3/4 in.  
Terminal pins (2): 1/4 in. long 1-1/4 in. apart along one edge.  
Mtg Screw (1): 5/16 in. long centered between term pins.

Comes with original install package for IC-720A.

Original cost: 65 Dollars shipped to Texas. (April 1990)

Your cost: 50 Dollars shipped anywhere in the continental US.

KA5T - Larry Wise - Georgetown, Texas - lewise@inetport.com QRP-L 89  
ex: KN8OSG K8OSG(1959-1967 MI) W6HED(1967-1968 Ca) W4ZTB(1968-1978 Fl)

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End of GLOWBUGS Digest 352  
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